

**FAX TRANSMISSION****DATE:** February 23, 2010**PTO IDENTIFIER:** Application Number 10/593,036-Conf. #5742  
Patent Number**Inventor:** Kenji SUZUKI et al.**MESSAGE TO:** US Patent and Trademark Office – Examiner H. Sayadian**FAX NUMBER:** 571-273-7779**FROM:** BIRCH, STEWART, KOLASCH & BIRCH, LLP

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Application No. 10/593,036

Docket No.: 1592-0165PUS1

**PROPOSED CLAIM AMENDMENTS - NOT FOR ENTRY**

1. (Currently Amended) An InP substrate for epitaxial growth,  
wherein, when haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto a surface of the InP substrate, by intensity of the incident light from the light source, the light source having a wavelength of 488 nm, every portion of an effectively used area measured by Surfscan 6220 exhibits a haze of not more than 1ppm, the InP substrate having a size of at least two inches; and wherein the InP substrate comprises  
~~the haze is not more than 1 ppm all over an effectively used area of the InP substrate and an off-angle with respect to a plane direction [[is]] of 0.05 to 0.10°, wherein the effectively used area includes the surface area of the substrate, with the exception of the peripheral part including the chamfered part of the substrate.~~
2. (Cancelled)
3. (Cancelled)
4. (Previously Presented) The InP substrate as claimed in claim 1, wherein a dislocation density is not more than 1000/cm<sup>2</sup>.
5. (Previously Presented) The InP substrate as claimed in claim 4, wherein the dislocation density is not more than 500/cm<sup>2</sup>.

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6. (Previously Presented) A compound semiconductor substrate for epitaxial growth, comprising an InP substrate and at least one epitaxial layer on the InP substrate, wherein:
- the InP substrate has an off-angle with respect to a plane direction of  $0.05$  to  $0.10^\circ$ ,
  - the InP substrate has a haze of  $0.5$  to  $0.8$  ppm, and
  - the haze in a surface of the at least one epitaxial layer is not more than  $1$  ppm,
- wherein haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto the surface of the at least one epitaxial layer or a surface of the InP substrate, by intensity of the incident light from the light source.
7. (Previously Presented) An InP substrate for epitaxial growth,
- wherein, when haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto a surface of the InP substrate, by intensity of the incident light from the light source,
- the haze is not more than  $1$  ppm all over an effectively used area of the InP substrate, and
  - an off-angle with respect to a plane direction is  $0.05$  to  $0.10^\circ$ .
8. (New) A method to reduce haze on a surface of an epitaxial layer grown on an InP substrate, comprising:
- epitaxially growing a semiconductor layer on the InP substrate according to claim 1.
9. (New) An InP substrate for epitaxial growth,

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wherein, when haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto a surface of the InP substrate, by intensity of the incident light from the light source, the light source having a wavelength of 488 nm, every portion of an effectively used area of the substrate exhibits a haze of not more than 1ppm;

wherein the InP substrate has a size of at least two inches, and comprises an off-angle with respect to a plane direction of  $0.05$  to  $0.10^\circ$ .

Partial translation of standard configuration specification  
of Surfscan 6220 (revised)

page 1, item 3. ABOUT THIS DEVICE

This device is designed to perform a detection of the number or amount, the position, and the size of extraneous substances, particles, damages, and the like, on a mirror-polished bare silicon wafer or on a wafer on which a film is formed, by a laser scanning method. The obtained data can be displayed and analyzed by a database embedded in the main body of this device.

page 3, item 5. BASIC SPECIFICATION

- Wafer size applicable to this device

This device is compliant to SEMI and JEIDA standards.

- wafer diameter of 2-6 inches

Wafers of both orientation flat type and notch type are applicable.

[Partially Omitted]

- Wafer transfer system

[Partially Omitted]

(2-inch and 3-inch wafers are applicable by the device being attached with optional supplies of factory shipment)